## AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in this application:

## LISTING OF CLAIMS:

1. (Currently Amended) A method for correcting position dependent scanning signals of an incremental position transducer for measuring positions, the position dependent scanning signals having deviations from ideal signals expected by a downstream evaluation unit, comprising:

feeding the position dependent scanning signals of the incremental position transducer to a correction unit in response to a signal request, the incremental position transducer including a periodic scale structure scanned by a scanning unit;

linking the position dependent scanning signals in the correction unit to correction data generated in accordance with active values of the scanning signals; and

exclusively feeding scanning signals for generating correction data to the correction unit for at least one predefined time segment of finite length following each request of new scanning signals to be corrected,

wherein no new scanning signals are supplied to be corrected during the at least one predefined time segment.

2. (Currently Amended) A method for correcting scanning signals of an incremental position transducer having deviations from ideal signals expected by a downstream evaluation unit, comprising:

 feeding the scanning signals to a correction unit in response to a signal request;

linking the scanning signals in the correction unit to correction data generated in accordance with active values of the scanning signals;

exclusively feeding scanning signals for generating correction data to the correction unit for at least one predefined time segment of finite length following each request of new scanning signals to be corrected; and

checking the signal request by a logic device to determine whether the signal request applies to scanning signals that are to undergo a correction in the correction unit or to scanning signals for generating correction data,

wherein no new scanning signals are supplied to be corrected during the at least one predefined time segment.

3. (Original) The method according to claim 2, further comprising performing no signal requests for a predetermined time segment that apply to scanning signals to be corrected in the correction unit.

4. (Currently Amended) A method for correcting scanning signals of an incremental position transducer having deviations from ideal signals expected by a downstream evaluation unit, comprising:

feeding the scanning signals to a correction unit in response to a signal request;

linking the scanning signals in the correction unit to correction data generated in accordance with active values of the scanning signals; and

exclusively feeding scanning signals for generating correction data to the correction unit for at least one predefined time segment following each request of new scanning signals to be corrected;

wherein the predefined time segment is shorter than a shortest difference in time between two signal requests of new scanning signals to be corrected, and

wherein no new scanning signals are supplied to be corrected during the at least one predefined time segment.

5. (Currently Amended) A method for correcting scanning signals of an incremental position transducer having deviations from ideal signals expected by a downstream evaluation unit, comprising:

feeding the scanning signals to a correction unit in response to a signal request;

linking the scanning signals in the correction unit to correction data generated in accordance with active values of the scanning signals; and

exclusively feeding scanning signals for generating correction data to the correction unit for at least one predefined time segment following each request of new scanning signals to be corrected;

wherein the signal requests of scanning signals to be corrected occur in constant time intervals, the predefined time segment shorter than the constant time intervals, and

wherein no new scanning signals are supplied to be corrected during the at least one predefined time segment.

6.   (Original) The method according to claim 1, further comprising digitizing analog signals of the scanning signals before the step of feeding the scanning signals to the correction unit.

7.   (Original) The method according to claim 1, wherein the step of feeding the scanning signals to the correction unit includes feeding at least two scanning signals to be corrected to the correction unit in response to request of scanning signals to be corrected, the two scanning signals being out-of-phase with each other.

8.   (Original) The method according to claim 1, further comprising triggering the signal request by at least one of a microprocessor of the correction unit and an external pulse.

9.   (Original) The method according to claim 1, further comprising generating the correction data as a function of active values of the scanning signals in a microprocessor.

10.   (Original) The method according to claim 1, further comprising correcting the scanning signals in accordance with at least one predefined correction algorithm.

11.   (Currently Amended) A device for correcting position dependent scanning signals of an incremental position transducer for measuring positions, the position dependent scanning signals having deviations from ideal signals expected by a downstream evaluation unit, comprising:

an arrangement configured to perform a method including the steps of:

feeding the position dependent scanning signals of the incremental position transducer to a correction unit in response to a signal request, the

incremental position transducer including a periodic scale structure scanned by a scanning unit;

linking the position dependent scanning signals in the correction unit to correction data generated in accordance with active values of the scanning signals; and

exclusively feeding scanning signals for generating data to the correction unit for at least one predefined time segment of finite length following each request of new scanning signals to be corrected, wherein no new scanning signals are supplied to be corrected during the at least one predefined time segment.

12. (Currently Amended) A device for correcting position dependent scanning signals of an incremental position transducer for measuring positions, the position dependent scanning signals having deviations from ideal signals expected by a downstream evaluation unit, comprising:

means for feeding the position dependent scanning signals of the incremental position transducer to a correction unit in response to a signal request, the incremental position transducer including a periodic scale structure scanned by a scanning unit;

means for linking the position dependent scanning signals in the correction unit to correction data generated in accordance with active values of the scanning signals; and

means for exclusively feeding scanning signals for generating data to the correction unit for at least one predefined time segment of finite length following each request of new scanning signals to be corrected, wherein no new scanning signals are supplied to be corrected during the at least one predefined time segment.

13. (New) A method for correcting position dependent scanning signals of an incremental position transducer for measuring positions, the position dependent scanning signals having deviations from ideal signals expected by a downstream evaluation unit, comprising:

feeding the position dependent scanning signals of the incremental position transducer to a correction unit in response to a signal request, the incremental position transducer including a periodic scale structure scanned by a scanning unit;

linking the position dependent scanning signals in the correction unit to correction data generated in accordance with active values of the scanning signals; and

for each request of new scanning signals to be corrected, reserving a predefined time segment of finite length, during which the correction unit is available exclusively for an acquisition of new scanning signals in order to generate new correction data.